

## **REMARKS**

### **I. Introduction**

Claims 24 to 30 and 32 to 55 are pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

### **II. Rejection of Claims 24 to 30, 32, and 33 Under 35 U.S.C. § 103(a)**

Claims 24 to 30, 32, and 33 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of UK Patent Application No. 2 153 845 ("Shaw et al.") and U.S. Patent Application Publication No. 2002/0157737 ("Chesnes et al."). It is respectfully submitted that the combination of Shaw et al. and Chesnes et al. does not render unpatentable the present claims for at least the following reasons.

Claim 24 relates to a solder alloy based on nickel, including at least the following elements: chromium, cobalt, molybdenum and nickel; and *a combination of palladium, boron, and yttrium configured to set a melting range of the solder alloy in a range of from about 1200°C to about 1260°C.*

Shaw et al. does not disclose, or even suggest, all of the claimed features of claim 24. Nowhere does Shaw et al. even refer to a combination of palladium, boron, and yttrium. Indeed, the Final Office Action at page 3 admits that "Shaw et al. neither expressly teach the alloy further comprises palladium in the claimed amount ..., nor teach the claimed melting range of the alloy." Therefore, Shaw et al. does not disclose, or even suggest, the feature of *a combination of palladium, boron, and yttrium configured to set a melting range of the solder alloy in a range of from about 1200°C to about 1260°C.*

Chesnes et al. also does not disclose, or even suggest, all of the claimed features of claim 24. Instead, Chesnes et al. merely indicates a braze alloy powder mixture including a low-melt powder composition and a high-melt powder composition. Chesnes et al., ¶ 6. In addition, the low-melt powder composition melts at a range of 2100°F +/- 100°F (~1093°C to ~1204°C), and the high-melt powder composition melts above 2400°F (~1315°C). Chesnes et al., ¶ 24. Thus, the braze alloy powder mixture of Chesnes et al. does not have a defined melting range. Instead, the low-melt composition melts between about ~1093°C and ~1204°C, and the high-melt composition melts above ~1315°C. Thus, Chesnes et al. describes compositions that have melting ranges outside the range of about 1200°C to about

1260°C. Accordingly, Chesnes et al. teaches away from a combination of palladium, boron, and yttrium configured to set a melting range between about 1200°C to about 1260°C. Therefore, Chesnes et al. does not disclose, or even suggest, the feature of *a combination of palladium, boron, and yttrium configured to set a melting range of the solder alloy in a range of from about 1200°C to about 1260°C.*

Accordingly, it is respectfully submitted that the combination of Shaw et al. and Chesnes et al. does not disclose, or even suggest, all of the features included in claim 24. Therefore, it is respectfully submitted that the combination of Shaw et al. and Chesnes et al. does not render unpatentable claim 24 for at least the foregoing reasons.

Thus, as for claims 25 to 30, 32, and 33, which depend from and therefore include all of the features included in claim 24, it is respectfully submitted that the combination of Shaw et al. and Chesnes et al. does not render unpatentable these dependent claims for at least the reasons more fully set forth above.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

### **III. Rejection of Claims 24 and 34 Under 35 U.S.C. § 103(a)**

Claims 24 and 34 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Shaw et al., U.S. Patent No. 4,802,933 (“Rabinkin”), and Japanese Patent Application Publication No. 63-65044 (“Wakushima et al.”).<sup>1</sup> It is respectfully submitted that the combination of Shaw et al., Rabinkin, and Wakushima et al. does not render unpatentable the present claims for at least the following reasons.

As more fully set forth above and as admitted by the Final Office Action at page 3, Shaw et al. does not disclose, or even suggest, the feature of *a combination of palladium, boron, and yttrium configured to set a melting range of the solder alloy in a range of from about 1200°C to about 1260°C.* Neither Rabinkin nor Wakushima et al. cures the critical deficiencies of Shaw et al.

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<sup>1</sup> The Office Action appears to be relying solely on an English-language abstract of Wakushima et al. That English-language abstract bears a date of **September 8, 2009**, and, therefore, that English-language abstract does not itself constitute prior art against the present application. To the extent that the Office Action is relying on the Japanese-language text of Wakushima et al., the Office **must** provide a translation thereof as stated in M.P.E.P. § 706.02(II).

In this regard, although Rabinkin refers to alloys including palladium, Rabinkin explicitly teaches away from the inclusion of boron in the alloys. Col. 1, lines 30 to 45. Thus, Rabinkin teaches away from the feature of *a combination of palladium, boron, and yttrium*. Further, Rabinkin merely describes a melting temperature range of between about 920°C and about 1020°C. Col. 3, lines 59 to 63. Thus, Rabinkin does not disclose, or even suggest, the feature of *a combination of palladium, boron, and yttrium configured to set a melting range of the solder alloy in a range of from about 1200°C to about 1260°C*. Further, Wakushima et al. merely describes using boron as a melting point depressant. However, nowhere does Wakushima et al. disclose, or even suggest, the feature of *a combination of palladium, boron, and yttrium configured to set a melting range of the solder alloy in a range of from about 1200°C to about 1260°C*.

Accordingly, it is respectfully submitted that the combination of Shaw et al., Rabinkin, and Wakushima et al. does not disclose, or even suggest, all of the features included in claim 24, and its dependent claim 34. As such, it is respectfully submitted that the combination of Shaw et al., Rabinkin, and Wakushima et al. does not render unpatentable claim 24, and its dependent claim 34.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **IV. Conclusion**

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

Date: February 24, 2010

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